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United States Department of the Interior, J.A. Krug, Secretary
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EDIBLE CRABS

The marine waters of the United States yield three species of crabs possessing all the qualifications of an important food resource - abundance, wholesomeness, and good flavor. These crabs are the blue crab of the middle and southern Atlantic coast and the Gulf of Mexico, the rock crab of New England, and the dungeness crab of the Pacific coast. There are also several other species of good quality and sufficient abundance to support small fisheries. Among them are the Jonah crab of New England, the stone crab of the south Atlantic coast, and the king crab of the Alaskan coast.

The blue crab, Callinectes sapidus, next to the shrimp and the lobster, is the most valuable crustacean of our waters. Its range is from Cape Cod to Mexico. It is common from Delaware Bay to Texas and the region of Chesapeake Bay is especially famous for its great numbers of blue crabs as well as the large size of the adult crab.

The favorite habitat of the blue crab includes estuarine waters such as bays, sounds, and channels at the mouth of coastal rivers. This crab prefers shallow water, not exceeding thirty feet in depth and is normally an inhabitant in salt water but is found in water that is only slightly brackish or even fresh to the taste. It may live for many hours out of water if kept moist and cool. It is an active animal, pugnacious, and will devour almost any animal food it can obtain. This crab lives from two to three years and generally spawns during its third summer.

The blue crab is caught and marketed both in a soft shell and hard shell condition. Soft-shelled crabs are immature crabs and are taken principally in Chesapeake Bay during the summer months with small dredges and dip nets. Soft crabs are shipped alive to the market in wooden boxes containing trays filled with moist sea grass. The soft-shell crab is only a temporary growth stage of the blue crab and from four to six molts or soft shelled stages may occur during the life of a blue crab after a market size has been attained. The entire body of a soft-shell crab may be eaten after cooking.

The hard blue crab yields the familiar crab meat of the eastern and southern United States. Dredges, baited lines, and traps of various types are used to capture the hard crab. Some hard crabs are shipped alive to markets but most crabs are steamed near the point of capture and the meat extracted from the shell. The meat is either shipped fresh to market in iced containers or may be canned for shipment to more distant areas. The catch of blue crabs in 1940 amounted to about 76,903,000 pounds valued at $1,826,000.

The rock crab, Cancer irroratus, is common only along the New England coast, but its entire range is from Labrador to South Carolina. While found mainly under rocks near low water mark, it is not uncommon about sandy beaches, as well as on rocky and gravelly bottoms offshore. The soft shell crabs hide in the rocks and are difficult to capture. The adult crab reaches a size of five or six inches across the back and are of smoother outline than are the blue crabs. The details of the life history are not fully known. The rock crab has scarcely been exploited commercially, but there is no reason why it should not be. It is abundant, contains more meat than the blue crab, and is quite equal to the latter in flavor. The crabs are taken in lobster traps or on trot lines, but the former method probably is the more efficient. The season approximately is April to November. The meat of these hard crabs is delicious whether served in the shell, as a salad, or deviled. A large amount of the meat is canned.

The Jonah crab, Cancer borealis, is similar to the rock crab of New England, the two being often confounded. There are characteristic and constant differences, the Jonah having a rougher shell, with scalloped edges, larger size and thicker legs. It is found in certain localities between Long Island and Nova Scotia. The principal localities are Noank, Connecticut, off Watch Hill and Newport, R.I., Narragansett Bay, Vineyard Sound, No Man's Land, and Salem, Mass., Casco Bay, and the Bay of Fundy. It inhabits the rocks near low-tide level and the clear waters of the ocean shores, but it never occurs in muddy or sandy bays. In consequence of its heavier shell it is better protected and not given to self-concealment. It is often found between the tides on the beach. It ranges in size up to about six inches across the shell. This species has never been an important article of commerce on account of its limited distribution. It is, however, quite wholesome and of good flavor. The combined catch of the Jonah and rock crabs in the New England states amounted to 2,415,000 pounds in 1940, valued at $54,000.

The dungeness crab, Cancer magister, of the Pacific coast is found from Unalaska to Magdalena Bay, Lower California. This crab is found in greatest abundance in shallow water on sandy bottom. It ranges from low water to a depth of 50 fathoms. In size it reaches eight inches or more and weighs up to 3-1/2 or 4 pounds, although the average weight is slightly under 2 pounds. It lives about eight years. Like all crabs, it molts in order to grow but the soft shell is leathery and unpalatable; the flesh undergoes changes at molting time that make it undesirable for food unless taken in full soft shell. As such it is seldom taken, however, for the molting individuals do not seek food and are not attracted by bait; neither do they enter nets until the shell has begun to harden, at which time the flesh is unfit for food. For these reasons the crab is captured largely in the hard shell condition by traps and hoop nets. The meat is either shipped fresh to markets near the Pacific coast or canned for inland trade. In Alaska, British Columbia, Washington, Oregon, and California the species is present in large enough numbers to support fishing on a commercial scale in many localities. The catch totalled 16,750,000 pounds, valued at $843,000 in 1940.

The stone crab, Menippe mercenarius, ranges from North Carolina to Texas. It is neither so abundant as the blue crab, nor so easily captured. It lives in holes in the mud along the borders of the creeks and estuaries of the coast, and often is found between or under rocks. It is captured by hand at the bottom of the holes, the crabber exposing his hand to a severe bite from the large claws. It is rarely taken in the soft-shell condition. It grows to a much larger size than the blue crab. The shell is hard and thick. The flesh is more like that of the lobster, and is most abundant in the large claws. Many consider it superior to the blue crab, but, on account of its scarcity in most localities and the difficulty of capturing it, the fishery is limited to a few points, such as Beaufort, N. C., Charleston, S. C., and Key West, Fla. The catch amounted to 62,000 pounds in 1940.

The king crab, Paralithodes camtschatica, is restricted to the north Pacific coast waters, has an excellent flavor, and reaches a far greater size than the other edible crabs. It has never been commercially utilized except by Japan and Russia, but with more energetic exploitation of our aquatic resources, there seems no reason why this and several other species of crabs should not prove available to the fisheries. Prior to the war, a small commercial fishery was carried on in Alaska. The catch amounted to some 10,000 pounds.

Further information concerning crabs, if desired, may be obtained from the following papers which are now out of print but which may be consulted in Government depository libraries.

Crustaceans, etc. By Richard Rathbun, in Fisheries and Fishery Industries of the United States, Sec. 1 (1884), pp. 763-780.

The Crab, etc. By Richard Rathbun, in Fisheries and Fishery Industries of the United States, Sec. V (1889), Vol. 2, Part 21, 627-658.
(Published by the U. S. Bureau of Fisheries, 881 pages).

The life history of the blue crab, Callinectes sapidus. By W.P. Hay, In Report, U. S. Bureau of Fisheries for 1904, 395-414.

The crab industry of Maryland. By W. A. Roberts, in report U. S. Bureau of Fisheries for 1904, 415-432.

Crab industry of Chesapeake Bay. By E. P. Churchill. Appendix 4 to Report U. S. Commissioner of Fisheries for 1918, 25 pages, illus.

Life history of the blue crab. By E. P. Churchill. In Bulletin U. S. Bureau of Fisheries. Vol. 36, 1917-18, 93-128, illus. (1918) Bureau of Fisheries Document No. 870.

The Pacific Edible Crab, Cancer magister. By Donald C. G. Mackay. Bull.LXII. Fisheries Research Board of Canada. 32 pages, illus. Ottawa, 1942.

The Alaskan King Crab. Fishery Market News. Vol. 4, No. 5A, Sp. Supp. Fish and Wildlife Service. 107 pages, illus. Washington, 1942.

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